



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,712	12/11/2003	Tieyu Zheng	P17132	2060
21186	7590	03/10/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH 1600 TCF TOWER 121 SOUTH EIGHT STREET MINNEAPOLIS, MN 55402			DUPUIS, DEREK L	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

81

Office Action Summary	Application No. 10/732,712	Applicant(s) ZHENG, TIEYU	
	Examiner Derek L. Dupuis	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6, 7 and 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/11/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. The office action mailed 7/13/2005 set forth an election of species requirement. Applicant responded to the election of species requirement on 12/16/2005. Applicant's election without traverse of Species B, Species H, and Sub-species D in the reply filed on 12/16/2005 is acknowledged. Claims 7 and 9-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/16/2005.
2. Applicant identified claims 6 and 9-20 as being drawn to the elected species. However, the examiner points out that the applicant elected species H which is drawn to a circular, oval, or curve shaped cap and substrate. Claims 10, 17, and 20 are drawn to boxed or rectangular substrates. Furthermore, the applicant elected Sub-species D shown in figures 9-11. As shown in figures 9-11 and as described in lines 14-27 in the specification, the metal sealing layer (140) is only on the top portion of the insulating base (110). Claims 9-20 are drawn to a method where the metal layer is attached to the sidewalls of the substrate. Claim 6 is drawn to a method where the second electrode contacts a sidewall of the metal layer. Figures 9-11 show the electrode contacting the top of the metal layer (140).
3. Therefore, claims 6, 7, and 9-20 stand withdrawn. Claims 1-5 and 8 are pending and have been examined.

Drawings

4. The drawings are objected to because many of the figures are too dark to properly distinguish the features of the invention. Corrected drawing sheets in compliance with 37 CFR

Art Unit: 2883

1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Fujimura et al* (US 5,666,450) in view of *Simon et al* (US 4,386,821).

7. Fujimura et al teach a method of manufacturing a hermetically sealed optoelectronic package as seen in figure 15 having an optoelectronic device (60) mounted on a first portion of a top surface of an insulating base (87). A metal layer of FeNi (79) is mounted on a second

portion of the top surface of the insulating base (87) so as to surround the first portion upon which the optoelectronic device (60) is mounted. A metal cap (85) is coupled to the metal layer (79). The method comprises the steps of supplying a force to push the metal cap (85) against the metal layer. While Fujimura et al do not explicitly disclose a force, a force of some kind must inherently be applied to the metal cap to make contact with the metal layer to achieve the configuration shown in figure 15. See column 13, lines 40-67.

8. Fujimura et al do not explicitly teach applying a first electrode to the metal cap, applying a second electrode to the metal layer and supplying a current between the two electrodes to weld the metal cap to the metal layer.

9. Simon et al teach a method of welding a metal cap (12) to a metal layer (11) as best seen in figure 4. Simon et al teach applying a first electrode (41) to the metal cap and applying a second electrode (42) to the metal layer. Simon et al teaches that an electric welding operation is then performed which one of ordinary skill in the art realizes involves passing current between the electrodes so as to weld the metal pieces together. See column 3, lines 36-50.

10. It would have been obvious to one of ordinary skill in the art at the time of invention to apply electrodes to the metal cap and the metal layer as taught by Simon et al to electrically weld the metal cap to the metal layer in the method taught by Fujimura et al. Motivation to do this is the suggestion by Fujimura et al to use electric welding to weld the cap to the metal layer (see column 13, line 57. Simon et al merely describes the steps of electric welding in greater detail.

11. Claims 2-5 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over *Fujimura et al (US 5,666,450)* in view of *Simon et al (US 4,386,821)*, as applied to claim 1 above, and in further view of *Thorwarth (US 4,418,264)*.

Art Unit: 2883

12. Fujimura et al in view of Simon et al teach a method for manufacturing an optoelectronic package as discussed above in reference to claim 1. Fujimura et al and Simon et al do not explicitly teach that the second electrode has multiple fingers or that the second electrode is coupled to an upper surface of the metal layer.

13. Thorwarth teaches a method of electrically welding two metallic pieces together shown best in figure 2. Thorwarth teaches using a first electrode (1) and second electrode (3 and 4) which comprises multiple fingers (3 and 4). Each finger contacts a distinct point in the welding area. Each finger also is independently positioned by metal springs (9 and 11). The currents (5 and 6) to each finger (3 and 4) are independently controlled. The second electrode is "cone-shaped" as it is wider at the top and the width decreases at the bottom as shown in figure 1. Also, Thorwarth teaches that the electrodes can be coupled at the upper surface of the welding joint.

14. It would have been obvious to one of ordinary skill in the art at the time of invention to use the method of independently controlling the current to independent finger electrodes taught by Thorwarth to perform the electric welding in the method taught by Fujimura et al in view of Simon et al. Motivation to do this would be that the independent fingers allow for "independent welding" (see abstract) which offers better welding control.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek L. Dupuis whose telephone number is (571) 272-3101. The examiner can normally be reached on Monday - Friday 8:30am-4:30pm.

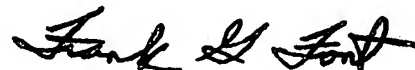
Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Derek L. Dupuis
Group Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800